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09/686,663	10/11/2000	Jay A. Alexander	10961066-1	4949

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EXAMINER	
WEST, JEFFREY R	
ART UNIT	PAPER NUMBER
2857	

DATE MAILED: 12/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/686,663	ALEXANDER, JAY A.
	Examiner	Art Unit
	Jeffrey R. West	2857

-- The MAILING DATE of this communication appears on the cover sheet with th c rrespondence address --

Peri d for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 August 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29 and 44-65* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29 and 44-65* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 October 2000* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "534" has been used to designate both "Pulse No." and "Pulse Info" (Figure 5), reference character "704B" has been used to designate both "Pulse No." and "pulse number field" (Figure 7B), and reference character "952" has been used to designate a check box and "sort criterion" (Figure 9B). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "303" (page 26, lines 17+), "1200" (page 37, lines 9+), "900" (page 42, line 5), "916" (page 42, line 28), "922" (page 43, line 3), "928" (page 43, line 7), and "536" (page 45, lines 24+). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: "804C", "804D", "804E", "932", "954", and "1215". A proposed drawing

correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

4. The abstract of the disclosure is objected to because its length exceeds 150-word limit. Correction is required. See MPEP § 608.01(b).

5. The disclosure is objected to because of a plurality of informalities:

Some of the informalities include:

On page 3, line 1, "whether or mot" should be ---whether or not---.

On page 21, line 24, "pulse data array" is incorrectly labeled "204" instead of "206" as it is labeled on page 21, line 9 and in Figure 2.

On page 22, line 19, "pulse manager" is incorrectly labeled "18" instead of "118" as it is labeled on page 22, lines 17-18 and in Figure 2.

On page 26, line 5, "pulse database generator" is incorrectly labeled "302" instead of "202" as it is labeled on page 25, lines 18-19 and in Figure 2.

On page 33, line 8, "measurement statistics" is incorrectly labeled "314" instead of "324" as it is labeled on page 33, line 2 and in Figure 3.

On page 35, line 1, "would be a an array" should be ---would be an array---.

On page 40, line 10, the specification describes continuing processing at block 1220 when the operator provides global transition voltages, however, as illustrated in Figure 12, the step of block 1220 is not completed in this situation.

On page 40, line 28, "pulse analyzer" is incorrectly labeled "206" instead of "204" as it is labeled on page 40, line 27 and in Figure 2.

On page 43, line 24, "searcher" is incorrectly labeled "902" instead of "502" as it is labeled on page 43, line 26 and in Figure 5.

On page 44, line 8, "'String Entry' button" is incorrectly labeled "932" instead of "934" as it is labeled in Figure 9A.

On page 46, line 22, "pulse numbers 6, 27, 180, 324, 641, 850 and 972" should be ---pulse numbers 5, 27, 180, 324, 641, 850 and 972---.

On page 47, lines 5 and 8, "sort index array" is incorrectly labeled "412" instead of "512" as it is labeled on page 47, line 1 and in Figure 5.

On page 47, line 5, "subset index array" is incorrectly labeled "410" instead of "510" as it is labeled on page 47, line 25 and in Figure 5.

On page 47, line 7, "cross reference array" is incorrectly labeled "414" instead of "514" as it is labeled on page 47, line 1 and in Figure 5.

On page 47, line 24, "searcher" is incorrectly labeled "506" instead of "502" as it is labeled on page 46, line 7 and in Figure 5.

On page 47, line 25, "sorter" is incorrectly labeled "524" instead of "504" as it is labeled on page 47, line 23 and in Figure 5.

On page 47, lines 27-28, "search criteria" is incorrectly labeled "522" instead of "520" as it is labeled on page 46, line 29 and in Figure 5.

On page 48, line 4, "sort criteria" is incorrectly labeled "534" instead of "524" as it is labeled on page 48, line 11 and in Figure 5.

On page 48, line 4, "subset index" labeled "612" while on page 48, line 28, and Figure 6, labels "sort index" as "612".

This list is does not include all of the informalities. The Examiner requests that Applicant correct the listed items as well as any other problems present in the specification.

Claim Objections

6. Claim 49 is objected to because of the following informalities:

In claim 49, the claimed step is labeled as step "1)", however, parent claim 44 already contains a step "1)".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> **The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.**

8. Claim 57 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite

for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 57 recites, "said data structure has a data format suitable for the implementing application", however, since the parent claim contains no mention of an "implementing application" it is unclear to one having ordinary skill in the art to which application the claim is referring.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 1-3, 24, 25, 44, 49, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,532,944 to Battista in view of U.S. Patent No. 6,301,547 to Felps and U.S. Patent No. 4,864,512 to Coulson et al.

Battista discloses a pulse management system [i.e., multichannel analyzer (MCA)] (Abstract and col. 9, line 53 to col. 10, line 9) configured to perform a plurality of pulse measurements on each of a plurality of pulses of an analog time-varying acquired signal that is sampled and stored in an accessible data structure (i.e., FIFO buffer) (Figure 5, item 63) with substantially no operator involvement (i.e. automatically) (col. 9 line 53 to col. 10, line 9 and col. 11, lines 45-55). Battista also

discloses a pulse database generator for use in a signal measurement system (i.e., multi-channel analyzer) (col. 12, line 57), the pulse database generator constructed and arranged to process acquisition data of an acquired signal in accordance with measurement parameters (i.e., region of interest) (col. 19, lines 45-54 and col. 22, lines 35-37) to generate pulse characteristic data (i.e., pulse heights) (col. 12, line 62), the pulse characteristic data unit comprising results of a plurality of pulse measurements applied to a plurality of pulses of the acquired signal (col. 11, lines 45-55, col. 12, lines 57-64, col. 19, lines 45-54, and col. 22, lines 35-37).

Battista does not disclose, however, implementing the pulse management system in a digital oscilloscope, performing measurements on previously acquired data stored in an acquisition memory, or performing statistical analyses on the stored pulse measurement results/characteristics.

Felps discloses a method for automatically acquiring and storing waveform measurements using a measuring instrument such as an oscilloscope (col. 3, lines 59-65). Felps also discloses storing acquisition data in memory (Fig. 1, item 36) for a plurality of measurements and allowing the operator to select which previously acquired signals are to be processed (i.e., "processed" by a histogrammer disclosed by Battista) (col. 5, line 61 to col. 6, line 26, col. 7, lines 10-19, and col. 7, line 57 to col. 8, line 4, and also "typical" waveform acquisition- col. 2, lines 1-27).

Coulson et al. discloses a measurement apparatus with plural displays of measured parameters including performing statistical analyses on measurement results (col. 3, lines 4-9) wherein the statistical analyses results in desired statistical

characteristics of the measured value (col. 3, line 64 to col. 7, line 9) that are then stored together in an accessible data structure in a corresponding memory (col. 4, lines 18-27).

It would have been obvious to one of ordinary skill to modify the invention of Battista to include storing the acquired data in memory and then allow the operator to select which acquired signals to process and store in an accessible data structure, as taught by Felps and Coulson, because Felps teaches that when waveform measurement instruments automatically acquire and store waveform data, the operator is free to perform other tasks during the waveform measurement process (col. 3, line 65 to col. 4, line 3); and because this capability also allows an operator to store multiple waveforms and then return at a later time to processes selected waveforms and, as suggested by Coulson et al., allowed for both measurement values and statistical results to be displayed simultaneously (col. 3, lines 4-9 and 18-27) which would save time and provide a consolidated display of information during troubleshooting activities.

It would have been obvious to one of ordinary skill to modify the invention of Battista to implement the pulse management system in a digital oscilloscope, because digital oscilloscopes, which are conventionally used to perform measurements of various types of signals including pulses, are functionally equivalent to multi-channel analyzers.

With regard to claim 50, although Battista in combination with Felts and Coulson doesn't specifically disclose a subset of pulses comprising all or less of the pulses

chosen for analysis by the operator. The instant specification on page 2, in a discussion of "related art", teaches enabling the operator to capture and display the desired portion (i.e., pulses) of an acquired input signal and it would have been obvious to one of ordinary skill to make use of a subset of pulses comprising all or less of the pulses chosen for analysis by the operator, because selecting a subset of pulses of an acquired waveform is a conventional practice in the art and would have provided, to the operator as results, only the desired pulse waveform values.

11. Claims 4, 12-15, 18, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Battista in view of Felps and Coulson et al. and further in view of U.S. Patent No. 5,239,378 to Tsuji et al.

With regard to claims 4 and 26, Battista discloses a histogrammer that samples acquisition data to generate at least one histogram, the histogram comprising a distribution of a number of occurrences that the acquired signal attained each of a plurality of signal levels over a certain time range (col. 7, lines 36-53).

With regard to claims 12 and 13, Battista discloses a histogram of voltage levels [i.e., pulse heights (pulse energies)] comprising a table stored in memory that lists the quantity of sampled occurrences (i.e., count) said acquired signal attained each of a plurality of signal level value over a certain time range (col. 7, lines 45-52).

With respect to claim 14, Felps discloses storing acquisition data in memory (Fig. 1, item 36) for a plurality of measurements and allowing the operator to select which previously acquired signals are to be processed (i.e., "processed" by the

histogrammer disclosed by Battista as noted above) (col. 5, line 61 to col. 6, line 26, col. 7, lines 10-19, and col. 7, line 57 to col. 8, line 4, and also "typical" waveform acquisition- col. 2, lines 1-27)

With regard to claim 15, Battista discloses an acquired signal comprising two signal levels having a logical interpretation (i.e., difference between "peak" and "baseline" of each pulse is the pulse "height"), and a histogram that is nominally a bimodal signal level distribution (i.e. the "heights" of the pulses create a histogram) (col. 12, lines 46-56).

With regard to claim 18, Battista discloses a smoothing function to identify one or more modes of a histogram (col. 9, lines 23-28 and col. 15, lines 23-63).

The invention of Battista, Felps and Coulson, however, does not disclose a mode finder that identifies one or more modes of the histogram.

Tsuji et al. discloses a gradation corrector with improved smoothing signal-to-noise ratio and fast response time comprising a histogram operating circuit for computing histogram features such as mode value (col. 3, lines 40-45).

It would have been obvious to one of ordinary skill to modify the invention of Battista, Felps, and Coulson to include a mode finder that identifies one or more modes of the histogram, because Tsuji et al. teaches that doing so allows for the histogram operating circuit to compute control values such as a limiter level (col. 3, lines 48-51).

13. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Battista in view of Felps, Coulson et al., and Tsuji and further in view of U.S. Patent No. 4,860,009 to LaRowe.

Battista in combination with Felps, Coulson, and Tsuji discloses all of the features of the claimed invention except for including an acquired signal that is an alternate mark inversion communication signal that transitions between three signal values, and the mode finder identifying three modes in the histogram; and measurement parameters that include an indication of the number of signal levels of the acquired signal.

LaRowe discloses an acquired signal that is an alternate mark inversion communication signal that transitions between three signal values (+3v, 0v, -3v) (Fig. 3: "AMI(TI)", and col. 3, lines 1-6). Further, the instant specification, on pages 27 and 28, states that "It should be apparent to those of ordinary skill in the art that mode finder 304 can be configured to identify any number of modes of histogram 312 depending on the type of acquired signal 208". Furthermore, the Examiner takes official notice that there are different types of AMI signals; some are two-level (see U.S. Patent No. 4,503,546) while others are three-level, as noted above.

Therefore, it would have been obvious to one of ordinary skill to modify the invention of Battista, Felps, Coulson, and Tsuji to include acquiring an alternate mark inversion communication signal that transitions between three signal values as taught by LaRowe, because alternate mark inversion signals are common in data communication systems; and data communication systems commonly require the

use of waveform measuring equipment during development and testing phases. Further the instant specification states that it would be apparent to those of ordinary skill in the art that a mode finder can be configured to identify any number of modes of histogram depending on the type of acquired signal (i.e., AMI signal). (*When applicant states that something is prior art, it is taken as being available as prior art against the claims. Admitted prior art can be used in obviousness rejections. In re Nomiya, 509 F.2d 566, 184 USPQ 607, 610 (CCPA 1975).)* Finally, because AMI signals can be both two-level and three-level, it would have been obvious to one of ordinary skill to modify the invention of Battista, Felps, Coulson, and Tsuji to use measurement parameters that indicate the number of signal levels in an acquired signal, because the application area in which the waveform measurement device is used would determine the number of signal levels (i.e., it would be beneficial to instruct the waveform measuring device to look for a particular number of signal levels, especially in a noisy signal).

12. Claims 5-11, 19-23, 27-29, 45-48, and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Battista in view of Felps, Coulson, and Tsuji and further in view of U.S. Patent No. 5,854,996 to Overhage et al.

With regard to claims 5, 11, 19, 22, and 27, Battista in combination with Felps, Coulson, and Tsuji discloses all of the features of the claimed invention except for including a transition calculator that determines a transition signal level at each of one or more transition percentages, wherein each of said one or more transition

percentages is a percentage of a difference between two of said signal levels having a logical interpretation. With regard to claims 45-48, Battista in combination with Felps, Coulson, and Tsuji et al. does not disclose using transition times and pulse type indication to perform pulse measurements or using/determining transition signal levels and global transition signal levels at one or more transition percentages between a top signal level and a base signal level. With regard to claims 6, 7, 23, 28 and 29, Battista in combination with Felps, Coulson, and Tsuji discloses certain features of the claimed invention, including performing pulse measurements including maximum voltage (i.e., "pulse height analysis": Battista; col. 7, lines 13-20), but do not disclose determining transition times at which each pulse attains each of said transition signal levels; and using the transition times and pulse type indication to perform pulse measurements.

Overhage et al. discloses determining transition times at which each pulse attains each of said transition signal levels (col. 5, lines 29-32 and col. 6, line 67 to col. 7, line 1). Overhage et al. also discloses using pulse type indication (i.e., "multi-bit digital samples that are representative of the amplitude of the input signal over time") (col. 5, lines 25-28) (i.e., "amplitude" necessarily indicates pulse polarity or "pulse type"). Overhage et al. discloses a transition signal level (i.e., output of voltage comparator) at each of one or more transition percentages (i.e., voltage threshold), wherein each of said one or more transition percentages is a percentage of a difference between two of said signal levels having a logical interpretation (i.e., the voltage threshold defines the boundary between two logic states) (col. 3, lines

1-9) based on one or more signal levels for each logical state of the pulse in the acquired signal including a top signal level and a base signal level [i.e., dual threshold consisting of a low threshold (i.e., base signal level) and high threshold (i.e., top signal level)] (col. 7, lines 33-41).

It would have been obvious to one of ordinary skill to modify the invention of Battista, Felps, Coulson, and Tsuji et al. to use the transition times/signal levels, as determined by Overhage et al., to perform pulse measurements, because Overhage et al. teaches a way to improve the time resolution of logic state transitions as is common in conventional logic analyzers (col. 6, lines 46-48). Further, it would have been obvious to one of ordinary skill to modify the combination to include using pulse type indication (i.e., amplitude) to perform pulse measurements, because pulse polarity (i.e., amplitude) is necessary to determine the logical state of an acquired signal. Furthermore, it would have been obvious to receiving/using a global transition signal level, because using one transition signal level would save processing time since the calculation to determine the transition signal level (in this case a global transition signal level) would not have to be performed for each signal acquisition (i.e., the number of calculations is reduced).

With regard to claim 8, Battista discloses a plurality of pulse measurements that are predetermined (i.e., a programmable baseline shifter automatically stabilizes baseline to within a prescribed range of voltages) (col. 8, lines 8-17).

With respect to claim 9, Coulson et al. discloses a measurement apparatus with plural displays of measured parameters including performing statistical analyses on measurement results (col. 3, lines 4-9).

With regard to claim 10, Battista discloses measurement parameters that are provided by the operator (i.e., a user-defined region of interest) (col. 19, lines 18-25).

With regard to claims 20 and 21, Battista in combination with Felps, Coulson, and Tsuji and Overhage et al. discloses certain features of the claimed invention, but do not disclose setting transition percentages to 10, 50 and 90 percent of the difference between the top signal level and the base signal level. However, it would have been obvious to one of ordinary skill to select values for these thresholds (i.e., transition percentages) as a matter of engineering design, because the values of these percentages will vary depending on the application area in which the signals are being measured (i.e., for example, how much noise energy is present) and the only way to determine which values will work best for a particular application area is through experimentation and optimization.

With regard to claims 46 and 47, as noted above, Battista in combination with Felps, Coulson, Tsuji et al., and Overhage et al. disclose many features of the claimed invention including generating at least one histogram of acquisition data (Battista: col. 12, lines 46-64); determining top, base and other voltage levels (Overhage et al.: col. 3, lines 1-9) and calculating transition voltages at each of the transition percentages relative to the top and base voltages (Overhage et al.: col. 7, lines 33-41), but do not disclose receiving transition percentages; or determining top,

base and other voltage levels based on modes of the histogram and pulse train type. However, it is necessarily the case that transition percentages will vary based on the application area in which the signals are being measured, and as a matter of engineering design choice; therefore, it would have been obvious to one of ordinary skill to have the measurement instrument receive transition percentages, which may need to be adjusted for the type and quantity of noise present in a particular signal. Further, it would have been obvious to determine top and base voltages based on the modes of the histogram, because Battista discloses a histogram based on a database of pulse heights (col. 12, lines 61-64) (i.e., top and base voltages are readily apparent and easily calculated); and also based on pulse train type, because pulse train type will already have been accounted for in the construction of the histogram.

With regard to claim 51, as noted above, Battista in combination with Felps, Coulson, Tsuji et al., and Overhage et al. disclose many features of the claimed invention, but do not disclose that the pulse train type be provided by the operator. As noted previously, it is common for noise to be present in signals that are to be measured. For this reason, it is desirable for the operator to have the ability to indicate before a measurement is made, the pulse train type, in order to tune the measurement instrument in preparation for the type and quality of signal that will be measured. Therefore, it would have been obvious to one of ordinary skill to modify the invention of Battista, Felps, Coulson, Tsuji, and Overhage et al. to allow the operator to provide a pulse type, because this type of information would be useful for

the measurement device to configure itself for the type of signal which is about to be measured.

13. Claims 52-56 and 58-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Battista in view of Felps, Coulson, Tsuji, and Overhage, and further in view of U.S. Patent No. 5,150,313 to van den Engh et al.

As noted above, Battista in combination with Felps, Coulson, Tsuji, and Overhage teaches many of the features of the claimed invention including time of occurrence data indicating a time a pulse occurred relative to a trigger event causing the signal measurement/storage (Felps, column 8, lines 19-33), measuring a value indicating a relative occurrence of a pulse relative to other pulses (i.e. average, standard deviation, median, or mode) in the form of global statistics (Coulson, column 7, lines 24-36), indicating the polarity of the pulse (Overhage, column 5, lines 25-28) and obtaining a maximum voltage measurement (Battista, column 7, lines 13-20), but does not teach assigning a unique identifier to each pulse measurement of the acquired signal.

Van den Engh et al. discloses a parallel pulse processing and data acquisition method including assigning a unique identifier to each pulse of the acquired signal (Abstract, col. 3, lines 14-16 and col. 9, line 50 to col. 10, line 16).

It would have been obvious to modify the invention of Battista, Felps, Coulson, Tsuji, and Overhage to include assigning a unique identifier to each pulse of an

acquired signal, as taught by van den Engh et al., because when more than one pulse is stored, it is necessary to provide a mechanism to allow access to each individual pulse, much the same way that data in a conventional databases is accessed, i.e., by a unique identifier.

With respect to claim 60, although not specifically disclosed, since it is well-known that when sampling a signal, the resulting digital values remain in the same order as they occurred, and the pulse measurements/characteristics are performed on the sampled data, it would have been obvious to one having ordinary skill to keep the characteristic data in the same logical order.

Response to Arguments

14. Applicant's arguments, filed 13 August 2002, with respect to claims 1-29 and 44-51 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

U.S. Patent No. 6,271,773 to Kobayashi teaches a coherent sampling method and apparatus including a FIFO acquisition memory.

16. Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey R. West whose telephone number is (703)308-1309. The examiner can normally be reached on Monday through Friday, 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (703)308-1677. The fax phone numbers for the organization where this application or proceeding is assigned are (703)308-7382 for regular communications and (703)308-7382 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

jrw
December 2, 2002

HAL WACHSMAN
PRIMARY EXAMINER
AU 2857